

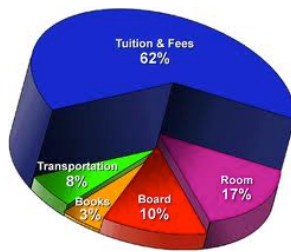
## Chapter 8: Data Analysis & Samples

### 8.4b Comparing Populations, Box Plots

Unit Question: How do we understand the world around us?

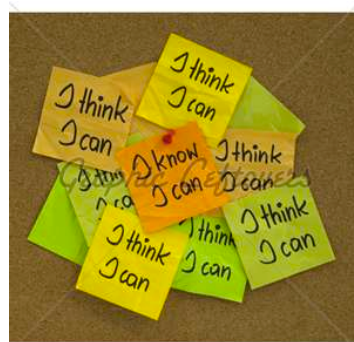
Learner Profile: Open-Minded

Area of Interaction: Community and Service



## I Can Statement:

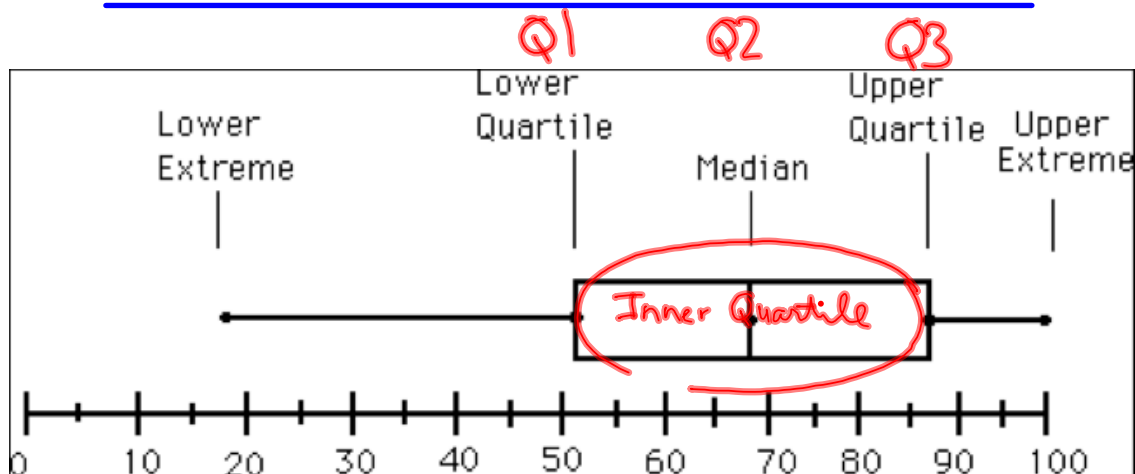
I can create and interpret a box and Whisker Plot.



# Box and Whisker Plot

A graphic way to display the median, quartiles and extremes of a data set

# Box and Whisker Plot



A Box and Whisker plot displays a data set along a Number line using a Five (5) Number Summary.

The median divides the data into Two (2) halves.

Quartiles are made up of Equal Sections . (4)

There are 3 quartiles.

Quartile 1 is the 1<sup>st</sup> section of the lower half.

Quartile 2 is the Median

Quartile 3 is the 1<sup>st</sup> section of the upper half.

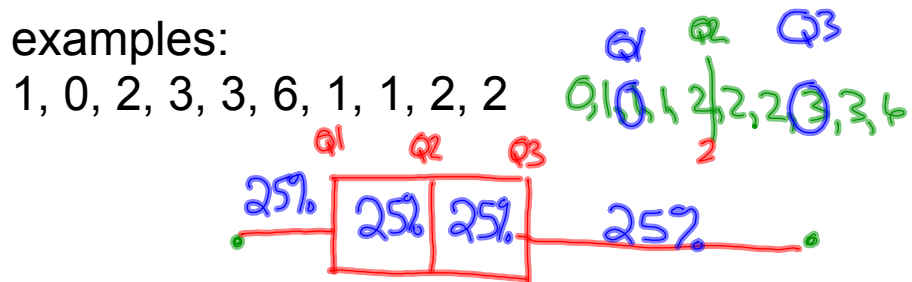
## The 5 Number Summary Consists of:

1. **Smallest Value** *lower extreme*
2. **Largest Value** *upper extreme*
3. **Quartile 1 (Q-1)**
4. **Quartile 2 (Q-2)** *Median*
5. **Quartile 3 (Q-3)**

## How To Draw a Box and Whisker Plot:

1. **Order the data**
2. **Find the median (Q2) and the lower and upper quartiles (Q1 and Q3).**
3. **Draw a number line that includes the least and greatest values.**
4. **Graph points above the number line for the least value (min), greatest value (max), median, Q1 and Q3.**
5. **Draw a box using the Quartiles. Draw a Line through the median. Draw whiskers to the min and max.**

examples:

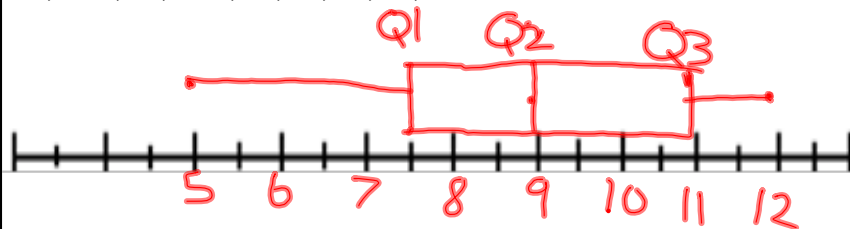


30, 62, 45, 22, 28, 50, 42, 35

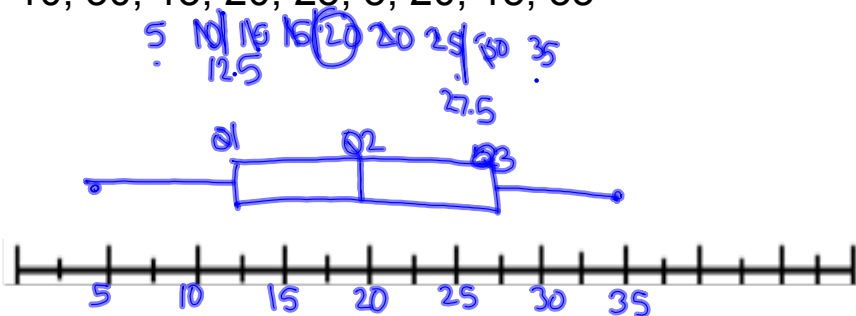


## On Your Own

8, 12, 9, 12, 8, 5, 9, 7, 10



10, 30, 15, 20, 25, 5, 20, 15, 35





# Assignment:

Box and Whisker  
Plot Worksheet

Due tomorrow at the  
beginning of class!!